

## REMARKS

Applicants appreciate the thorough examination present application as evidenced by the Office Action of December 18, 2006 (hereinafter "Office Action") and the final office action of May 30, 2007 (hereinafter "Final Action"). However, Applicants respectfully request reconsideration of the pending claims for the reasons discussed below.

### **The Section 112 Rejections**

Claims 1, 10, 11, and 21 stand rejected under 35 USC §112, first paragraph, as failing to comply with the enablement requirement. In particular, the Final Action asserts that the recitations of "comparing the x-bit data output from the nm memory cell arrays to generate nm-bit comparison result data, and outputting y-bit comparison result data selected by selecting, by y bits, the nm-bit comparison result data in response to a control signal to the y data I/O pads, respectively, in a test data read step are not supported by the specification". Final Action, Page 2.

Applicants respectfully disagree. For example, as shown in Figure 3 of the present application, the nm memory cell arrays are designated by memory cell regions (1) to (8), the x-bit data is designated by a total of 32-bit data including the four bits output from each of the nm memory cell arrays (1) to (8), and the nm-bit comparison result data is designated by the 8-bit data output from the comparator 16. The nm-bit comparison result data is designated by the 8-bit data generated by comparing corresponding bits of eight 4-bit data, the y-bit comparison result data is designated by 4-bit comparison result data ma1 to ma4, and the y data I/O pads are designated by DQ1, DQ5, DQ9, and DQ13. *See*, for example, Specification, Figure 3.

Accordingly, Applicants submit that the present specification as originally filed provides full support for the recitations of Claims 1, 10, 11, and 21. Thus, Applicants respectfully request withdrawal of the rejections of these claims and the claims dependent therefrom under 35 USC section 112, first paragraph.

In addition, Claims 1, 10, 11, and 21 stand rejected under 35 USC 112, second

paragraph as being indefinite. In particular, the Final Action asserts that it is "not clear what the (nmxx)-bit represents" and "whether the y-bit comparison result data is the y data I/O pads or not". Final Action, page 3.

In response, Applicants note that the "x" in the "(nm×x)-bit data" represents a multiplication sign. Also, as noted above, the "y-bit comparison result data" is designated by ma1 to ma4, and is thus different from the "y data I/O pads" designated by DQ1, DQ5, DQ9, and DQ13; however, the y-bit comparison result data is output through the y data I/O pads.

Accordingly, Applicants submit that the recitations of Claims 1, 10, 11, and 21 clearly point out and distinctly claim that which the applicant regards as the invention. As such, Applicants respectfully request withdrawal of the rejections of these claims and the claims dependent therefrom under 35 USC section 112, second paragraph.

### **The Section 102 Rejections**

Claims 1-20 stand rejected under 35 USC 102(a) as being anticipated by applicant admitted prior art (U.S. Patent Application Publication No. 2004/0252549; hereinafter "AAPA"). Claim 1, for example, recites:

1. A method for testing a semiconductor memory device including nm memory cell arrays for respectively outputting x-bit data when n word lines and m column selecting signal lines are selected wherein n, m, and x are integers greater than 1, the method comprising:

extending y-bit data received through y data I/O pads to (nm×x)-bit data to write the x-bit data to the nm memory cell arrays in a test data write step; and

comparing the x-bit data output from the nm memory cell arrays to generate nm-bit comparison result data, and outputting y-bit comparison result data selected by selecting, by y bits, the nm-bit comparison result data in response to a control signal to the y data I/O pads, respectively, in a test data read step. (Emphasis added).

Applicants respectfully submit that the AAPA fails to disclose or suggest at least the recitations of Claim 1 highlighted above. For example, the AAPA discloses that the semiconductor memory device simultaneously outputs 8-bit comparison result data generated by comparing a total of 32-bit data of eight 4-bit data outputs from the nm memory cell arrays through 8 data I/O pads. See AAPA, Fig. 1. However, the present specification discloses that

the semiconductor memory device generates 8-bit comparison result data generated by comparing a total of 32-bit data of eight 4-bit data output from the nm memory cell arrays and sequentially outputs 8-bit comparison result data by 4-bits in response to the control signal through 4 data I/O pads. See Specification, Fig. 3. Thus, the AAPA fails to disclose or suggest "comparing the x-bit data output from the nm memory cell arrays to generate nm-bit comparison result data, and outputting y-bit comparison result data selected by selecting, by y bits, the nm-bit comparison result data in response to a control signal to the y data I/O pads, respectively, in a test data read step", as recited in Claim 1.

Accordingly, Applicants respectfully submit that the AAPA fails to disclose or suggest at least the recitations of Claim 1 highlighted above. Thus, Applicants submit that Claim 1 is patentable for at least the above reasons. Claims 10, 11, and 21 include similar method and device recitations, and as such, are patentable for at least similar reasons. Also, dependent Claims 2-3 and 12-13, and 36-41 are patentable at least per the patentability of Claims 1, 10, 11, and 21 from which they depend.

In re: Kim et al.  
Application No.: 10/823,076  
Filed: April 13, 2004  
Page 10 of 10

**Conclusion**

Accordingly, based on the remarks provided above, Applicants respectfully submit that all of the pending claims are now in condition for allowance. Thus, Applicants respectfully request withdrawal of the outstanding rejections, allowance of the pending claims, and passing the application to issue. Applicants encourage the Examiner to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,

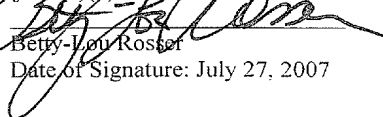


Rohan G. Sabapathypillai  
Registration No. 51,074

**USPTO Customer No. 20792**  
Myers Bigel Sibley & Sajovec  
Post Office Box 37428  
Raleigh, North Carolina 27627  
Telephone: 919/854-1400  
Facsimile: 919/854-1401

**CERTIFICATION OF ELECTRONIC TRANSMISSION  
UNDER 37 CFR § 1.8**

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(3) to the U.S. Patent and Trademark Office on July 27, 2007.



Betty-Lou Rosser  
Date of Signature: July 27, 2007